



Orchard Swallowtails
(*Papilio aegeus aegeus*)
Female (top) Male (bottom)

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CLUB PLANNING AND ORGANIZING GROUP - 2002

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PLANNING AND ORGANIZATION MEETINGS

A quarterly meeting is scheduled in order to plan club activities and the newsletter.
See BOIC Programme.

CONTACT ADDRESS

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AIMS OF ORGANIZATION

- To establish a network of people growing butterfly host plants;
- To hold information meetings about invertebrates;
- To organize excursions around the theme of invertebrates e.g. butterflies, fireflies, ants, dragonflies, beetles, freshwater habitats, and others;
- To promote the conservation of the invertebrate habitat;
- To promote the keeping of invertebrates as alternative pets;
- To promote research into invertebrates;
- To encourage the construction of invertebrate friendly habitats in urban areas.

NEWSLETTER DEADLINES

If you want to submit an item for publication the following deadlines apply:

March issue – February 21st

June issue – May 21st

September issue – August 21st

December issue – November 21st

COVER DRAWING

Orchard Swallowtails (*Papilio aegeus aegeus*) drawing by Lois Hughes



PRESIDENT'S POSTING

With our 8th anniversary as a Club just past we have settled into some comfortable ways of doing things as a group. This has lots of advantages, including being used to how different committee members work and reducing time involved in sorting things out. Much of the routine work is now managed very effectively. I'd like to thank the current committee members for their unstinting support of the club. Unfortunately there's also a minor down side to all of this. It is important for any Club to have new people involved so that fresh approaches can be taken. With this in mind and our approaching Annual General Meeting scheduled for April 12th, I'd like to invite you to become involved in our Planning Group conducted as a General meeting of members (advertised in the program) and held every quarter. Just as our subject, butterflies and other invertebrates go through a life-cycle, so do groups such as ours. We need some new eggs – will you be one?

Wishing you Seasons Greetings and looking forward to your participation in a forthcoming event.

Helen Schwencke

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The following article features one of the Swallowtail Butterflies shown on our Poster, Lifecycles of the Swallowtail Butterflies of S.E. Queensland. The poster can be obtained from BOIC, PO Box 2113, Runcorn, 4113. The cost for members is \$6 plus \$5 postage and handling, non-members \$10 plus \$5 postage and handling.

Orchard Swallowtail (*Papilio aegeus aegeus*)

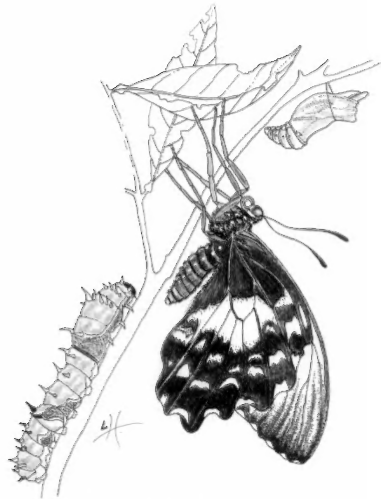
Are you one of the many people who have seen caterpillars on the citrus trees and wondered what they were? If so, this article should prove to be interesting for you.

There are actually three butterflies in south-east Queensland whose larvae use citrus trees as their foodplants, the Dainty Swallowtail (formerly Dingy Swallowtail), the Fuscous Swallowtail (formerly Capaneus Butterfly) and the Orchard Swallowtail.

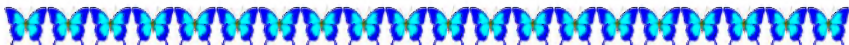
The latter is the one we are concerned with in this article and most will recognize its larvae as “*the ones that look like bird droppings*”. The young larvae are brown with white markings and as they grow older, can be a variety of different colours, varying from yellowish-green with white markings, to very dark green with white and brown markings.

All swallowtail butterfly larvae have a built-in chemical defence mechanism, called an osmeterium. This is the name given to a pair of fleshy tubes that extend from behind the head of the larvae when they are being attacked. In the case of the Orchard Swallowtail, the tubes are red and emit a fairly strong citrus-like odour. If you find any of these larvae, tap them on their backs, they will think they are being attacked and instinctively raise the osmeterium. Run your finger along the red projections and then smell your finger. If you were a bird, would you keep attacking?

When fully grown, about 60mm long, they will search for a suitable place to pupate. This is usually on the underside of a leaf of the foodplant, or on one of the branches or branchlets. Once there, the larva spins a silken pad, on to which it attaches itself by the tip of its abdomen and a central silken girdle. It will then shed its skin for one final time, to become a pupa.



Female Orchard Swallowtail, larva and pupa



The pupae vary in colour, usually depending on where they pupate. Camouflage is their best defence once they are attached to the plant. The pupae found on the underside of the leaves are generally lime-green in colour, whilst those found attached to the brown stems, take on that same brown colour.

The adult butterfly is one of the largest found in south-east Queensland, with the male having a wingspan of about 11 cm and the female slightly larger at 13cm. The male is primarily black on both upper and undersides. The upperside has a series of white or cream markings near the tip of the forewings and a cream patch with one red “anal” spot on the hindwings. The underside of the male forewing is similar but the hindwings have a narrow marginal band of cream with crescentic lines of red and blue semi-lunate spots on the black background.

The female butterfly looks greyish-white overall and is very similar on the upper and undersides. The forewings have a large brown-black patch near the body and a series of narrow brown lines running horizontally to the wing margin. The hindwings have the same dark patch near the body, then a white patch, followed by a broad, dark band along the outer edge of the wings. Inside this dark band are crescentic lines of red and blue semi-lunate spots (generally with more blue on the underside) and red anal spot as for the male.

Apart from the common citrus trees, there are also a wide range of native plants, including *Micromelum minutum*, *Clausena brevistyla*, *Geijera parviflora* and *Flindersia australis*, on which the larvae feed.

Further information can be obtained by reading “*Butterflies of Australia*”, by Common and Waterhouse, 1981, or “*Butterflies of Australia, their identification, biology and distribution*” by Michael F. Braby, 2000 CSIRO Melbourne.

Bob Miller

PLANT PROFILE

***Zieria smithii* (Sandfly Zieria)** host plant of the Orchard Swallowtail

Zieria smithii in the family Rutaceae, is a native host of the Orchard Swallowtail. It is a medium sized shrub which occurs naturally in partly shaded areas where adequate moisture is available. Its preferred habitat is moist woodland, where it occurs as an understorey plant. The distinguishing features are its leaves, which are compounded with three leaflets, the central leaflet being longest, the oil glands on the leaves and of course the distinctive smell when its leaves are crushed. This smell gives rise to its common name Sandfly Zieria, which some claim has a biting midge repellent



property. Lanolin Bush, another common name, may relate to the oil within the glands on its leaves. The leaves are shiny above and dull beneath. Numerous small flowers are borne in groups arising from each leaf axil. These can be pale pink or white and appear from late winter to spring, followed by oval brown fruits which contain the seed.

Zieria is an interesting shrub to include in any butterfly garden.

My thanks to Lorna Johnston for her help in compiling the above.



Zieria smithii

Lois Hughes

CREATURE NOTE

Give me a home where the invertebrates roam

People are familiar with the concept of providing artificial homes for possums or birds. Now we also need to consider artificial homes for smaller creatures many of which also lose their homes when the environment is changed. Dead branches and fallen trees are often removed to create a tidy appearance. As a result those creatures that live in borer holes in old wood are one group in particular that has suffered a loss of their homes.

It is possible to partially remedy this situation by providing artificial borer holes. Last year I salvaged the leg from an old table. This was quite solid and made of untreated wood. I drilled holes in one face as deep as the drill bits would go. I tried a variety of sizes, even a few quite small ones since I had once seen a tiny bee using a nail hole on the front wall. Very little work has been published on which bees use what size holes so a bit of experimentation is in order.

I placed the wood under some shelter so the holes wouldn't get rained on and with the holes facing outwards where there would be more chance of being seen by a passing bee.

It took a little while but slowly some of the holes were being sealed up. Unfortunately I had made the mistake of placing the wood in a spot where it was not easily visible. So it took a while to discover the identity of the mysterious squatters. Two were bees I did not recognize but the third was a type of Mason bee (*Chalicodoma* sp.)

It had a distinctive orange abdomen. I had seen this bee in the garden pollinating the flowers of the Rattlepods (*Crotalaria* sp.) that I grow for the Pale Pea-blue butterfly



(*Catopyrops panormus*). It had to sort of wiggle its way into the flower to reach the pollen and nectar. I hadn't seen the European honeybees pollinate these flowers so I was pleased to have provided a home for the native bee that does the job.

During the last few months some of the seals have been opened and the new bees have emerged ready to start the process again. Some of the nests have only very small exit holes and I suspect a parasitic wasp with a very large ovipositor has been patrolling my fake borer holes. Similar species of wasps use their ovipositor to reach into bee nests to lay their eggs.

I found this project to have been quite worthwhile and very easy to carry out. A bit of old wood and a few drill-holes was all it took. Those who would like more options for housing native bees could read through the back issues of Aussie Bee the Bulletin of the Australian Native Bee Research Institute.

Frank Jordan

EXCURSION REPORTS

Sunday, 20th October saw a group of about ten members meet and look through June's Garden at Beerwah. June has done a great job creating butterfly friendly space. She has open, sunny spaces that are sheltered from the wind and densely planted gardens full of nectar and larval food plants. Unfortunately the weather hasn't been kind to



Caper White (*Belenois java*)

butterflies (or many other invertebrates at that), and without spring rains, there's been little new plant growth for butterflies to breed up on. We saw Monarchs (*Danaus plexippus*), Common Crows (*Euploea core*), and an Orchard Swallowtail (*Papilio aegeus*) flying around. Also a Splendid Ochre (formerly *Symmomus*

Skipper) (*Trapezites symmomus*) and many Plumbago Blues (*Leptotes plinius*) were observed in flight, some egg laying on their host plants Long-leaved Matrush (*Lomandra longifolia*) and the non-native *Plumbago auriculata* respectively. A few passing Caper Whites (*Belenois java*)

that were the remnants of a small migration in SEQ this year also graced our visit. The highlight of the visit was a Callitris Pine tree in June's garden that was "a back to back home" for a European honey bee and a native bee (*Trigona* sp.) nests. We thank June for hosting this event.



Monarch (*Danaus plexippus*)



After leaving Beerwah the bulk of members proceeded to Bob and Judy Miller's at nearby Landsborough. A quick tour through the garden and seed raising facilities and then on to Andrew Atkins' at Eudlo near Mooloolah, for an impromptu visit.

Andrew, who is Australia's – and probably the world's – premier Skipper butterfly authority, recently moved from Newcastle to this property in the rainforest. He soon discovered a colony of the elusive Miskin (or Coral) Jewel nearby. We were fortunate to see both male and female specimens of this butterfly (*Hypochrysops miskini*) flying around the tops of Lychee trees in his garden. Andrew has begun to plant up his garden with various butterfly hostplants in an effort to both diversify and increase his local butterfly population.

The area between Eudlo, Palmwoods and Mooloolah is well known for a particular rainforest type – subtropical palm forest – and is dominated by Piccabean (or Bangalow if you reside south of the border!) palms. Due to property development, cane farming and highway construction, very little of this type of forest remains and Andrew and his neighbours on acreage properties are very fortunate to have their own pristine remnants.

Other butterflies seen near Andrew's included the lovely Skipper (*Telicota anisodesma*) (Large Darter) which feeds on the climbing Whip Vine (*Flagellaria indica*) seen growing nearby in the rainforest. Also noted in a neighbour's section of rainforest were male and female Richmond Birdwings flying around and feeding on some Lantana blossoms.



Pararistolochia praevenosa

[Subsequently, Bob Miller found the hostplant, *Pararistolochia praevenosa*, growing just off the track near where we saw the two butterflies and pointed it out to us.]

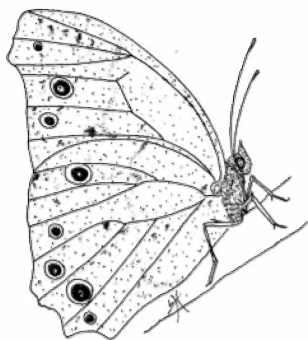
Andrew would like to invite the club to make a formal visit to his property once he has settled in and his garden has progressed. We can look forward to this "official" visit in the next year or so and meanwhile wish him well in his endeavours.

John Moss

Denise and Hardy were our hosts on Sunday 17th November, for our visit to Munruben. Their garden is part of the Land for Wildlife program, and backs onto a bushland reserve. Once again the incredible dry weather has not been a friend to our



subject of interest. Our visit was graced with the sight of a Lesser Wanderer (*Danaus chrysippus*), Zebra or Plumbago Blues happily breeding on a Plumbago clump, a Symmopus Skipper egg laying on *Lomandra longifolia*, an Evening Brown (*Melantis leda*), a ringlet, most likely to have been a Brown

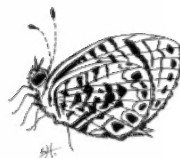


Evening Brown (*Melantis leda*)

Ringlet (*Hypocysta metirius*), Common Crows, a very old, tattered female Orchard Swallowtail, a Lemon Migrant (*Catopsilia pomona*) and the dry season form of a Small Grass-yellow (*Eurema smilax*), though its hostplant was not in sight. Other invertebrates seen included a roundish green Lacewing larva with a bristly edge of unknown species; a paper nest wasp (*Ropalidia romandi cabeti*) that forms a large nest attached to trees completely surrounded by a paper envelope; unidentified species of red dragonflies and robber flies; and two species of

beehawk moth larvae feeding on *Pavetta australiensis*. These caterpillars are being raised to identify the species. They have pupated but have not emerged at time of writing.

Thanks to Denise and Hardy for their hosting of this event and to Hardy for entertaining us with his unusual talent with the musical saw.



Zebra Blue

Helen Schwencke

ARTICLES OF INTEREST

BUTTERFLY RECORDING FILE by Murdoch De Baar

I have on offer a word document file which will provide a system to help record / remember garden species & district species in a list designed to record monthly larval & adult presences, for the satisfaction of the enthusiast. This file is designed for southeast Queensland and includes a few peripheral species also. I am offering this file to promote the recording of butterflies.

In May 1980 Griffith University recruited a restricted group of amateur entomologists to compile records of Brisbane & district butterfly records over a period of 18 months, however the results of this survey were never published. My programme is a modified version to suit garden & district recordings, and the nomenclature is upgraded. This will provide the amateur entomologist with a long term record-keeping system which



can be used for future talks or comparisons etc. I recommend that the recipient keeps a duplicate unrecorded file, so that a printed copy can be taken on field trips.

I have delineated the district as Nambour roughly to Kilcoy through Coominya (including Mt Glorious) to Cunningham's Gap (not Toowoomba) to the border (including Springbrook), but this is totally arbitrary and can be changed by the recorder. The first recording column is designed for your garden (one * for adults & two * for larvae) and is marked as "Corinda" which of course will be changed by the recorder. *Pieris rapae* has been marked as an example.

The records I have kept for my garden at Corinda, Brisbane, have shown **17** skippers (Hesperiidae), **8** swallowtails etc. (Papilionidae), **18** whites & yellows (Pieridae), **19** browns etc. (Nymphalidae), **26** blues (Lycaenidae) have been seen, giving a total of **88**. Despite this, a number of possible species have **not** been noted, such as *Trapezites eliena*, *Toxidia rietmanni* or *T. parvulus*, *Graphium macleayanus*, *Hypocysta adiante*, *Ypthima arctous*, *Ogyris oroetes* and so on. Some of the **more interesting recordings** however, included *Hasora chromus*, *Protographium leosthenes*, *Heteronympha merope*, *Mynes geoffroyi*, *Hypochrysops cyane*, *Ogyris zosine* and *Erysichton palmyra*.

A number of species on this list may seem "pie in the sky". *Hypochrysops byzos* is represented in the DPI collection by a single specimen dated 1901 from Mt Gravatt. I have taken *Hesperilla sarnia* from near Nambour (Kulangoor). *Belenois java peristhene* (originally from New Caledonia & Norfolk Is.) has been taken a couple of times on the east coast of Qld. & NSW. As a boy, I noted *Hypolimnas alimena* from Bowen Hills, and I have specimens from the Cooloola area. *Argyreus hyperbius* was taken from Indooroopilly, 1916. *Acrodipsas arcana* has been taken in the Brisbane region. *Anisynta tillyardi* flies around Cunningham's Gap. Also an *Ogyris aenone* was taken from Coominya, near Esk, by Clarrie Franzen about 1970 (T. Lambkin, pers. com.).

If you send a brief request (one or two words) with your Email address to Murdoch (Email : debaar@powerup.com.au), should be sufficient. For those members not on email, send a stamped, addressed envelope to BOIC, PO Box 2113, Runcorn 4113 and note on the back "Butterfly Recording File". We will send you a copy.

Technique for Growing Butterfly Vines on Trees by James Beale

There are a number of attractive native vine species which are host to interesting butterflies in the Brisbane region (see eg. table below) but which are not often utilised in gardens due to their less controllable growth habit and limited availability. Many of



these vines can be successfully and safely grown on young trees as well as robust, mature trees when there are no other structures available using the technique described here.

TABLE

Vine spp.	SE Qld Butterfly	Suitable trees
<i>Aristolochia acuminata</i> (Tagala vine)	Clearwing Swallowtail Richmond Birdwing	small to large trees
<i>Cynanchum (Ischnostemma) carnosum</i> (Mangrove Milk vine)	Swamp Tiger, Blue Tiger, Common Crow, Lesser Wanderer	small to large trees
<i>Melodorum (Rauwenhoffia) leichhardtii</i> (Zig-Zag vine)	Pale Green Triangle, Four-barred Swordtail	large robust trees, plenty of space
<i>Callerya (Millettia) megasperma</i> (Native Wisteria)	Common Pencilled-blue, Narrow-banded Awl	large robust trees
<i>Mucuna gigantea</i> (Burny Bean)	Green Awl, White-banded Plane	robust tree with room
<i>Passiflora aurantia</i> (Native Passion Vine)	Glasswing	small to large trees
<i>Trophis (Malaisia) scandens</i> (burny vine)	Purple Crow	larger trees

The common names in this table are taken from Michael Braby's Butterflies of Australia (2000)

There are however, difficulties in establishing vines on trees of all ages and sizes including, but not limited by:

- competition from support tree for light, water and nutrients;
- training a vine to climb a tall trunk;
- growing vines up trees which shed their bark in sheets;
- risk of strangling a support tree or having the vine break under the pressure of an expanding support trunk.

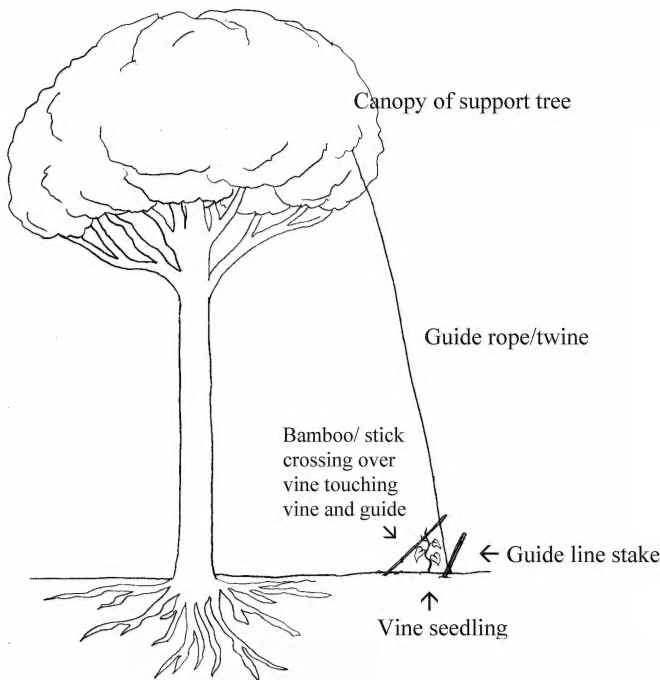
All of these hindrances are avoided by planting young vines just beyond the edge of the support tree's drip line (ie. just beyond the outer edge of foliage) and attaching some non-synthetic twine or fine rope from the canopy of the tree down to where the vine seedling is planted (see Figure). Vines planted like this are best positioned away from frequented pathways to avoid vines being damaged and marked clearly (eg.



fluorescent flagging tape) to avoid accidents. Sometimes an additional stick or bamboo stake temporarily placed above the vine and touching the twine will help direct new growth onto the guide-line.

If the canopy is too high or dangerous to reach via a ladder or long pole, guide-lines can be secured by attaching a stick or rock to one end of the twine and tossing up and over a part of the canopy or side of the tree if it is tall and cylindrical in habit. It may take several goes to get line attached in a suitable position.

FIGURE



I suggest using a fine non synthetic twine or rope so that the line will break down of its own accord after the vine has attached itself successfully to the canopy and hence not require removal by the gardener. If the vine is fast growing (eg. *Aristolochia acuminata* (formerly *tagala*) then standard cotton twine should last long enough for the vine to establish on a tree; slower vine growth may need a slightly thicker twine or thin rope.

Some vine species may be too big or vigorous (see Table) to grow on all but the most robust trees and probably should be avoided except by butterfly enthusiasts or if the garden has an undesirable, exotic tree species like Chinese Elm, Camphor Laurel or



Golden Rain Tree, and where there is no interest to protect a non-ornamental tree from a large vine.

James Beale

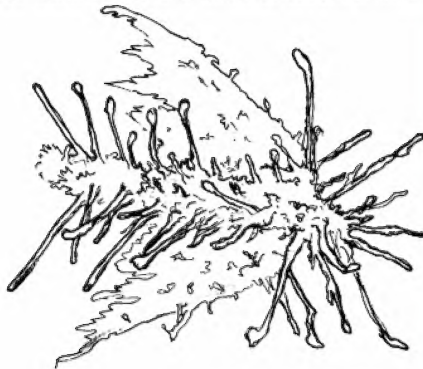
A moth to ponder

After attending a weekend Fern Identification course at New England University, a group of us on the Mid North Coast of New South Wales decided to form a Fern Study Group in our area.

We spent many weekends away from home driving up rough tracks into the mountains. From the Watagan State Forest, south west of Newcastle to Mt Warning in the north of the state, we camped in the bush. We searched for and identified the ferns growing in each area. With this information we would make a computerized fern map.

However I was not only interested in ferns. At Barrington Tops a tiny silver sugar glider allowed me to stroke him with one finger. Extremely varied beautiful mosses and lichens colonise on rocks, logs and tree trunks. Here is another forest in miniature to be explored under a magnifying glass.

But the most mysterious discovery was a grey moth with soft white half inch long sticky spikes protruding from all over its body. These sticky spikes glued the moth to a leaf. I detached the leaf, placed it in a box and carefully carried it home for further investigation. On opening the box I was amazed to find the spikes had grown slightly longer and attached themselves to the sides of the box. In a few days the spikes had appeared to dry and stiffen, as I hurriedly made a drawing and had photos taken before the specimen disintegrated.



Drawing by Jean of her mystery moth

Now came the hard part – to identify this strange phenomenon. I was only an amateur and this was way beyond me. Time passed and the mystery remained unsolved.

Several years passed and I joined an Earthwatch Expedition to Cape Tribulation. This was organized by Roger Kitching and we were to look at the biodiversity of the insects in the rainforest.



We set up dish traps on the ground and fogged the tops of the rainforest trees with a short lasting insecticide. The tiny specimens that fell into the traps were then taken to our makeshift laboratory. A small number would be placed in a petri dish to be observed under a microscope. I had to quickly learn to identify each Order and specie. They were then stored in separate vials for future reference. Experts in many fields had arrived here from all around the world to partake in this expedition.

Of course I had brought my drawings and photographs of the mystery moth hoping for an explanation.

Nobody had ever seen anything like this. There was much interest and discussion as we sat by lamplight for hours after the evening meal in the rainforest.

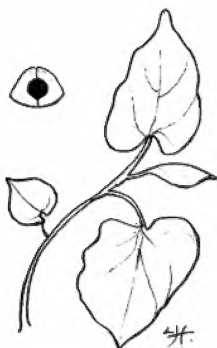
After much speculation and controversy an agreement was finally reached. This was a previously unseen example of a moth parasitised by a fungus.

The mystery was solved.

Jean Hope

Note on a change to the scientific name of the Cairns Birdwing Vine

A recent investigation into the plant genus *Aristolochia* (the Birdwing or Pipe-flower Vines) has revealed that the scientific name of the Cairns Birdwing Vine, *Aristolochia tagala*, is a junior synonym of the species *A. acuminata*. Subsequently, the name *A. acuminata* replaces *A. tagala* as a name available for this species. (Bossert 1997, Sands 2002)



Juvenile *A. acuminata*

This is due to the procedure for assigning scientific names to all organisms (the rules of the International Committee of Zoological nomenclature, ICZN), in which the first scientific name used to describe a particular species is given preference if other names are later used to describe that species. As *A. acuminata* was used to describe this particular plant in 1783, 49 years before the name *A. tagala* was used, the name *A. acuminata* should now be used in preference to *A. tagala* as the scientific name for the Cairns Birdwing Vine.

A. acuminata (pronounced Aris-to-lo-cia aku-min-ata) is a widespread species, occurring from China, through South-east Asia to New Guinea, the Solomon Islands and North Queensland and is a larval host for a large number of the so-called *Aristolochia* swallowtails in the Australasian region. In Australia, the Red-bodied Swallowtail (*Pachliopta polydoras queenslandicus*), Clearwing Swallowtail or Big Greasy (*Cressida cressida*) and the





Mature *A. acuminata*

Cairns, Iron Range, Cape York and New Guinea Birdwings (*Ornithoptera euphorion*, *O. priamus macalpinei*, *O. pr. pronomus* and *O. pr. poseidon*, respectively) have been recorded to naturally utilize *A. acuminata* as a host plant.

It is unfortunate that a botanical name familiar to lepidopterists has to be superseded, but this often happens in botany (and less often in entomology!) with species and generic reassignments, and we have to get used to it. However, on the brighter side, we don't have to lose the name *tagala* which can now be used in the vernacular as "Tagala Vine" much as we have done with *Melodorum* (ex-*Rauwenhoffia*)

leichhardtii as "Zig-Zag Vine" or "Rauwenhoffia" (Moss 2002). This is probably just as well, as the

Cairns Birdwing butterfly (*O. euphorion*) also feeds on several other vines in the family Aristolochiaceae in north Queensland (Braby 2000).

John Neilsen and John Moss

References:

- Bosser, J. 1997 Identite de *Aristolochia acuminata* Lam. et de *A. tagala* Cham (Aristolochiaceae) Adansonia (series 3) 19(1):169-170
 Braby, M.F. 2000. Butterflies of Australia, their identification, biology and distribution. CSIRO Melbourne.
 Moss, J.T. 2002. Butterfly Host Plants of South-east Qld. and Northern NSW. BOIC Brisbane.
 Sands, D.P.A. 2002 in Entomological Society of Queensland News Bulletin 29 (9) : (217)

Discovering the Tall Rice Plant (*Pimelea ligustrina*).

Leslie and I were exploring Gloucester section of World Heritage Listed Barrington Tops National Park, about 750 Km SSW of Brisbane; it is also 321 km N of Sydney and camping is available at Gloucester 30 km SE of Gloucester Tops. It is the most southerly of the east coast rainforest parks, its mountains and plateaus are drained by the Manning to the north and the Hunter to the south with diverse vegetation including lush sub tropical rainforests, to alpine woodlands with Antarctic beech and snow grass meadows watered by an annual 2000mm rainfall.





Photo of *Pimelea ligustrina* taken by
Leslie Raboczi

Driving on a mountainous gravel road in wet sclerophyll forest with Antarctic tree ferns and heavy undergrowth, we noticed in the sunshine a 3 metres tall and wide cream shrub in full bloom on the right, covered with drooping pincushion flowerheads. It was a moving haze of colored butterflies: Black Jezebels (*Delias nigrina*), Macleay's Swallowtails (*Graphium macleayanus*), Australian Yellow

Admirals (*Vanessa itea*), Painted Ladies (*Vanessa kershawii*), an unidentified Skipper and several hoverflies all feeding on the nectar. Avidly we photographed both the shrub and what butterflies would stay still, as well trapping a hoverfly to be photographed at leisure.

Braby (2000:771-2) mentions this shrub as the larval food plant of the Yellow-spotted Blue (*Candalides xanthospilos*), although as neophytes we didn't know enough then to look for larva.

Internet surfing produced Cultivation Notes from Plants with a Future by Labill suggesting it could be grown from heeled cuttings of half-ripe wood in July/August; while SGAP suggests: "well-composted soil with good drainage, in sun to quite heavy shade. Prune after flowering - local sub alpine species". Greig and Cronin also have information on this shrub.

References:

Braby, Michael F. Butterflies of Australia. CSIRO, Collingwood, Vic. 2000: 256, 336, 579, 582.

Cronin, Leonard. Key Guide to Australian Wildflowers. Reed, Chatswood, NSW. 1993: 74-5.

Greig, Denise. Field Guide to Australian Wildflowers. New Holland, Sydney. 1999: 414.

Frank's note: Bush Nuts Native Nursery in the Tallebudgera Valley occasionally has seedlings of the local form of this plant available. Being a wholesale nursery you will need to buy in bulk or for small quantities order through your local native nursery.

The following article written by **Pam Hall** is reprinted with permission from "Springbrook Voices – Your Free Community Newsletter" Issue 58 Feb'02-Apr'02



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Pimelea linifolia

Colleen Raboczi

The Sounds of Silence Return

Although most of us welcome the various sounds of the bush as part of our enjoyment of life here on the mountain, the once every few years return of the cicada cacophony can have even the most diehard of us running indoors to shut out the continuous and deafening racket. Varying in intensity on different parts of the plateau, I think we'd all agree that the cicadas have been the dominating feature of our hot, dry summer.

Most of us have indulged in the one upmanship discussions that revolve around the "if you think this is loud you should hear them at my place" statements and yes in the heavily forested areas we have almost suffered from industrial deafness.

Unsuspecting tourists have been seen emerging from the tracks dazed and with wads of green protruding from their ears. On closer inspection these revealed themselves as leaves that have doubled as makeshift earplugs. Good old Aussie ingenuity! In fact over the past 3 months someone could have capitalized on this phenomenon with a roadside stall specializing in ear muffs and plugs, marketed as essential bushwalking equipment.

The ranger's wildlife diary tells us that cicadas seem to visit us in such large numbers, roughly every five years, the last emergence was 1996 and 1991 before that. To learn more about them and their lifecycle, I consulted an article in the Australian Geographic (No. 56, Oct-Dec 1999) which informed me that all but a few of our 200 species of cicada are found nowhere else in the world. Now be warned this article was written by famed Australian wildlife photographer Densey Clyne an out and out cicadaphile, referring to them as "musicians, producing a soundtrack for sultry summer evenings"! Maybe so in suburban gardens where a mere handful thrum and throb in the night air, but we suffer a full frontal airborne assault, even to the extent of being dive-bombed if anywhere near a bright light and many an evening did we and our guests suffer the indignity of a blast of cicada pee descending from a great height. However as Densey points out, they are fascinating creatures, leading amazing lives both above and below ground.

The cicada spends up to seven years in the ground feeding on sap, occasionally moulting and increasing the size and air space of his subterranean home. But how did it get there in the first place? As a hatchling not much larger than a flea, the cicada nymph fluttered on the breeze from a tall eucalypt, landed in the leaf litter and started digging in search of sap. Slowly developing and depending on the species, the wait before metamorphosis can be as little as 9 months or as long as several years. We're not sure what triggers the emergence, it might be weather conditions, calls of other nymphs or simply that its development is complete and the next stage is ready to begin. The nymphs tunnel upwards, leaving a thin plug at the surface and then return to wait until the time is right and when they do emerge they instinctively crawl to the nearest vertical surface. It seems that our local species is known as the *greengrocer*,



each species has its own distinctive call and that they are set off by a single singer ... all I know is that at the canyon he/she was a very early riser! Now something that we either knew or suspected the cicada is the loudest of all singing insects!! Elsewhere they have been recorded from 80 metres away at 100 decibels (louder than a jackhammer) and although we don't have Australian measurements, Densey reckons we'd beat that hands down.

So how does the little brown nymph change its form to become a large green adult? In the dark the transformation begins ... for about an hour the nymph pumps extra air through the breathing holes along its sides and it is this pressure that splits the skin. The head and thorax emerge and then the crumpled wings and dangerously for a time it is hanging upside down, held only by the tip of its abdomen. Once fully emerged it leaves its cast (called exuviae) and small children collect them as playthings. The wings then slowly fill with blood, stretching and smoothing and gradually hardening, with the bluish tinge disappearing. The broad plates underneath the wings are the tymbals, the sound producing organs which are only possessed by the males. Densey comments on the close proximity of the cicada's ears, wondering why they don't deafen themselves. Apparently they are able to relax their tympana so that their hearing is not so sensitive and they tune in only to their own species, filtering out other sounds. Wish we could do likewise. Now they've gone and the cycle will begin again.

So it seems that we'll have a quieter life for another 5 years or so but I guess what summer would be complete without the cicada soundtrack to accompany the balmy evenings and the smell of freshly mown grass.

TEACHING TIPS

Hand Raising Butterflies

I have had a lifelong interest in butterflies but, until four years ago, had not really devoted time to learning much about them. Then I decided to try to raise some up to pupal stage and sell them. The theory was simple: grow some host plants; wait for the butterflies to 'do their thing'; collect those pupae and send them off. Thus began a steep learning curve because reality dictates that pupae just do not grow on trees like fruit to be harvested in season.

I soon became aware of numerous factors that needed to be addressed such as:

- Keeping the host plants healthy by watering, fertilizing, positioning in optimum sunlight, controlling insect pests, fungus etc.
- Controlling predators such as: ants, spiders and 'bugs' that sucked out the eggs; ants, spiders, 'bugs', wasps, birds and lizards that ate the larvae; rats, mice and lizards that ate the pupae.



- Controlling parasites such as tachinid flies and braconid wasps.
- Controlling diseases from bacteria and viruses.

The following basic system has evolved:

- Grow lots of healthy host plants.
- Collect eggs daily.
- 'Incubate' the eggs in containers.
- Nurse the young larvae in containers for an instar or two.
- Move the larvae on to 'clean' host plants as cuttings in polystyrene boxes or potted plants in insect screened enclosures.
- After pupation, collect pupae from boxes or enclosures.
- Some pupae may be kept for butterflies to emerge for breeding in larger enclosures and I usually release some 'local' adults in the garden.

A couple of comments:

- I 'clean' host plants by treating them with a 0.4% liquid pool chlorine (sodium hypochlorite) solution for ten or fifteen minutes then rinsing off with plenty of fresh water. This usually kills or removes most tachinid fly eggs.
- Polystyrene boxes are covered with insect screen or netting to keep the larvae in and partially covered with cling wrap to keep the cuttings fresh.
- The bases of the cuttings are wrapped in paper and placed in small jars of water. Some larvae will drown themselves if the paper is not used.
- Cuttings and boxes are changed every two or three days and the used boxes and jars are then sterilized with a chlorine solution.
- Any 'diseased' larvae are dropped into a jar of chlorine solution for later disposal.

Ross Kendall

www.butterflyencounters.com.au

LETTERS

The following is an extract from a letter received from a lady who lives on the Maroochy River, Qld. The letter was dated 21.10.02.

.... "The reason for my writing you, I did see the Regent Skipper three times this month from my verandah. Firstly, I contacted the Queensland Museum and I believe they could have been the people who gave me your name. I did feel this information could have been of interest to you especially at this time of the year. I note they are on the wing mainly between January and May and I also note they like to border the forest. Well, my driveway borders the Parkland National Forest so that could be the reason I have been seeing them. Actually, many years ago I also saw one at Lytton

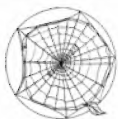


before quite a bit of that land was cleared, not sure just what month I saw it there. Anyway, I saw the Regent Skipper on the 3rd, 12th and 15th October 2002 from my verandah.

..... Last year we had the Richmond Birdwing here about this time. Hoping it arrives this year.”

Ed.: “Butterflies of Australia” by Common and Waterhouse – 1981 states that the Regent Skipper is on the wing from January to May, however Braby in “Butterflies of Australia – Their Identification, Biology and Distribution - 2000” says that in S.E. Qld. Regent Skippers are on the wing from September through to May. It is a very common butterfly on the Sunshine Coast and several of our members have seen it at various times of the year in that area. You are privileged to have this gem in your garden. We plan to have a Creature Feature on this species in our next newsletter.

YOU ASKED

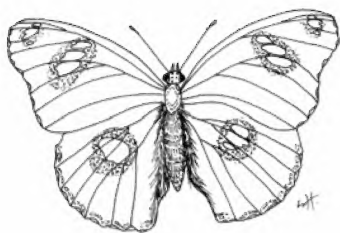


Are there any butterfly host plants I shouldn't grow?



It mostly depends on the situation where you are growing the plant, for instance growing a large vine on a small tree or a wetland plant on a dry ridge may not work well. Also leaving the clover in your lawn for the common grass blue is probably not a good idea if you walk barefoot and are allergic to the bees attracted by the flowers.

However there are two plants I don't grow anymore. The first is *Sida rhombifolia* or Paddy's Lucerne. This is listed as a host plant for the Varied Eggfly (*Hypolimnast bolina*). It does make a good food plant for the caterpillar and is very tough. However



Varied Eggfly (*Hypolimnast bolina*)

in a garden situation it has a few drawbacks.

The first is that the seeds, which are produced in large numbers last for many years. I am still finding seedlings coming up in my garden five years after the last plant went to seed. The plant can grow to a metre tall. It shades out any other plants and it then spreads into all your other garden beds where it also takes over. It has a very strong root system and is difficult to pull out by hand even when small. Once it gets to a certain size it is almost impossible to pull

out by hand.



The second plant is *Cayratia clematidea* one of the native grapes. This is a host for the attractive day-flying Joseph's Coat moth. This vine is relatively well-behaved but has the habit of putting out long shallow roots. Where these are close enough to the surface they will put out new suckers. After a while you will find this plant coming up everywhere. Even a small piece of root can send up a sucker and most shoots have a tuber beneath them. This versatility is quite useful to the plant in a bushland setting, especially when Hawkmoth caterpillars completely strip the vines. In a garden situation it can mean a lot of regular weeding. I now grow *Cissus opaca* for this moth. It can be a bit vigorous in a garden and also has a tuber but it rarely suckers

Where weeding is not an issue and where tough vigorous plants are required then these would be useful.

Frank Jordan

NEW CD-ROM

As reviewed in the September Newsletter, Garry Sankowsky's excellent CD-ROM "**A Garden on the Wing - Attracting Birds and Butterflies to the Garden**" is now available. The cost is \$71.50 including GST. The address if you are mailing your order is Zodiac Publications, P.O. Box 210, Tolga, Qld. 4882.

You can also order from the website – www.rainforestmagic.com - the price then being \$65.00 plus \$5 postage.

Garry can be contacted at the above address, by phone at 07 4095 4469, fax 07 4095 5017 or by emailing him at zodpub@tpgi.com.au

YOUR CLUB'S MEMBERSHIP DIRECTORY

In February, 2002 your Club's organising committee decided to start encouraging members to network with each other in their local areas, and across their areas of interest. To this end we have now produced a membership directory. Only those members who have given us their permission have been included in the directory.

If you would like to be in a future issue of the directory please email Daphne at bowden@itconnect.net.au or phone: 07 3396 6334

POSTERS

The Club has recently obtained copies of 2 posters which had previously been unobtainable :



The Butterfly Alphabet Poster which shows all the letters of the alphabet and numerals 1-9 appearing in the wings of butterflies and moths. This poster can be viewed by visiting www.butterflyalphabet.com

Cost: Non-members \$25 plus \$5 postage

Members \$23 plus \$5 postage

The Domino Poster - A guide for field, school or garden with 250 butterfly illustrations in colour

Cost: Non-members \$10 plus \$1 postage

Members \$8 plus \$1 postage

Lifecycles of the Swallowtail Butterflies of South East Queensland, compiled by the BOIC

Cost: Non-members \$10 plus \$5 postage

Members \$6 plus \$5 postage

These posters can be obtained from BOIC, PO Box 2113, Runcorn, 4113.

WORLD WIDE WEB SITES TO WATCH

<http://www.zen.uq.edu.au/entomology/ins-info/cicada.htm>

This is the definitive informational site on Cicadas of the east coast of Queensland and New South Wales. You will be entertained by the songs of cicadas if you have audio facilities.

BACK ISSUES

Back Issues of the Club Magazine are available at a cost of \$1 each plus postage (1-2 copies \$1.10 - 3-6 copies - \$1.50.)

ADS AND EXCHANGES

Sometimes you may have an oversupply of butterfly larvae and your food supply will not hold out. If this happens, contact Rob MacSloy - 07 3824 4348 - who operates the Register of Host Plants. He can put you in touch with prospective "foster parents". Have **YOU** advised Rob of the host plants you have available?

"The Laced Fritillary" a painting by Lois Hughes. Prints now available. 12 beautiful butterfly card designs also available now. Phone Lois on 3206 6229.

In issue #20 we featured the Chequered Swallowtail and its hostplant *Cullen tenax*. Lois Hughes has quantities of *Cullen tenax* seeds available. Send a stamped addressed envelope to 163 West Mt. Cotton Road, Mt. Cotton, Qld. 4165

See Garry Sankowsky's host plant offer in September's newsletter.



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BUTTERFLY AND OTHER INVERTEBRATES CLUB PROGRAMME

Visit a club member's garden and local parks at Paradise Point, Gold Coast

When: Sunday, 19th January, 2002 from 10am
Where: Meet Jabiru Island Environment Park (UBD Gold Coast Map 8, K12). Travel along Broadwater Ave, over the Coombabah Creek Bridge and park on the right hand side.
What: We will be looking through a Mangrove Board walk, visiting Carmen's garden and walking through various local conservation parks.
Bring: Morning Tea, Lunch and afternoon tea. Sunscreen and insect repellent may also be useful
Contact: Daphne 07 3396 6334 or email bowden@itconnect.net.au

Planning and Management Meeting

What: Our planning meetings are informative and interesting. As well as planning our activities we share lots of information. All members are welcome.
When: Wednesday 12th February, 2003 at 7.30pm
Where: Daphne's place at Manly
Contact: Daphne for details on 07 3396 6334

Visit a club member's garden at Indooroopilly

When: Sunday 23rd February, 2003 at 10am
Where: Meet at Keating Park, Stamford Street, Indooroopilly (UBD Map 178, K4)
What: Ross has a large flight cage, rearing rooms and masses of host plants for some of the common butterflies for release at weddings
Bring: Morning tea
Contact: Daphne 07 3396 6334 or email bowden@itconnect.net.au

Visit a club member's garden at Loganholme

When: Sunday 23rd March, 2003 at 10am
Where: Meet at "Butterfly Brilliance", 43 Cairns St., Loganholme. Use the Beenleigh – Redland Bay Rd. freeway exit.
What: Anne is building a business supplying butterflies for weddings and special occasions. She has made several trips to the USA to learn about butterfly breeding.
Bring: Morning tea
Contact: Daphne 07 3396 6334 or email bowden@itconnect.net.au to RSVP or for more details

Annual General Meeting

When: Saturday 12th April, 2003 at 2pm
Where: IndigiScapes Centre, Runnymede Road, Capalaba
What: Short AGM followed by afternoon tea, a show and tell and a walk through the native plant gardens
Contact: Daphne 07 3396 6334 or email bowden@itconnect.net.au to RSVP or for more details

Gold Coast residents wishing to attend Club activities, contact Carmon Burke 5577 1013 re car-pooling

If you plan to attend any of the above events please contact the person indicated.



DISCLAIMER

The Newsletter seeks to be as scientifically accurate as possible but the views, opinions and observations expressed are those of the authors. The Newsletter is merely a platform for people to express their views and are not necessarily those of the BOIC. If inaccuracies have inadvertently occurred and are brought to our attention we will seek to correct them in future editions. The Editor reserves the right to refuse to print any matter which is unsuitable, inappropriate or objectionable and to make nomenclature changes as appropriate.

ACKNOWLEDGMENTS

Producing this newsletter is done with to the efforts of:

- Those members who have sent in letters and articles
- Lois Hughes who provides illustrations including the cover
- Daphne Bowden who works on layout, production and distribution
- John Moss for scientific referencing and proof reading
- Helen Schwencke who developed the overall design
- Frank Jordan for inspiration

We would like to thank all these people for their contribution

ARE YOU A MEMBER

Please check your mailing label for the date your membership is due for renewal. If your membership is due, please renew as soon as possible.

Membership fees are \$12.00 for Individuals/Schools and \$17.00 for family membership.

Would you please advise bowden@itconnect.net.au if you get/change an email address.

Butterfly and Other Invertebrates Club Inc.

c/- PO Box 2113

RUNCORN Q. 4113

**Next Meeting: End of Year BYO BBQ and Light-trapping,
Saturday, 7th December, 2002 starting 4.30pm (see Sept. Newsletter
for details)**



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